Sanitation District No. 1

Celebrating 60 Years of Service

Yesterday

Today

Tomorrow

Yesterday...

The History of Wastewater Treatment in Northern Kentucky

Bromley Plant

1946 ◆ SD1 Established

1954 ◆ Primary treatment process introduced when the Bromley Treatment Plant entered operation

1972 ◆ Clean Water Act Enacted

1979 ◆ Dry Creek Treatment Plant enters operation in order to meet growing environmental regulations

Dry Creek Construction

Yesterday…

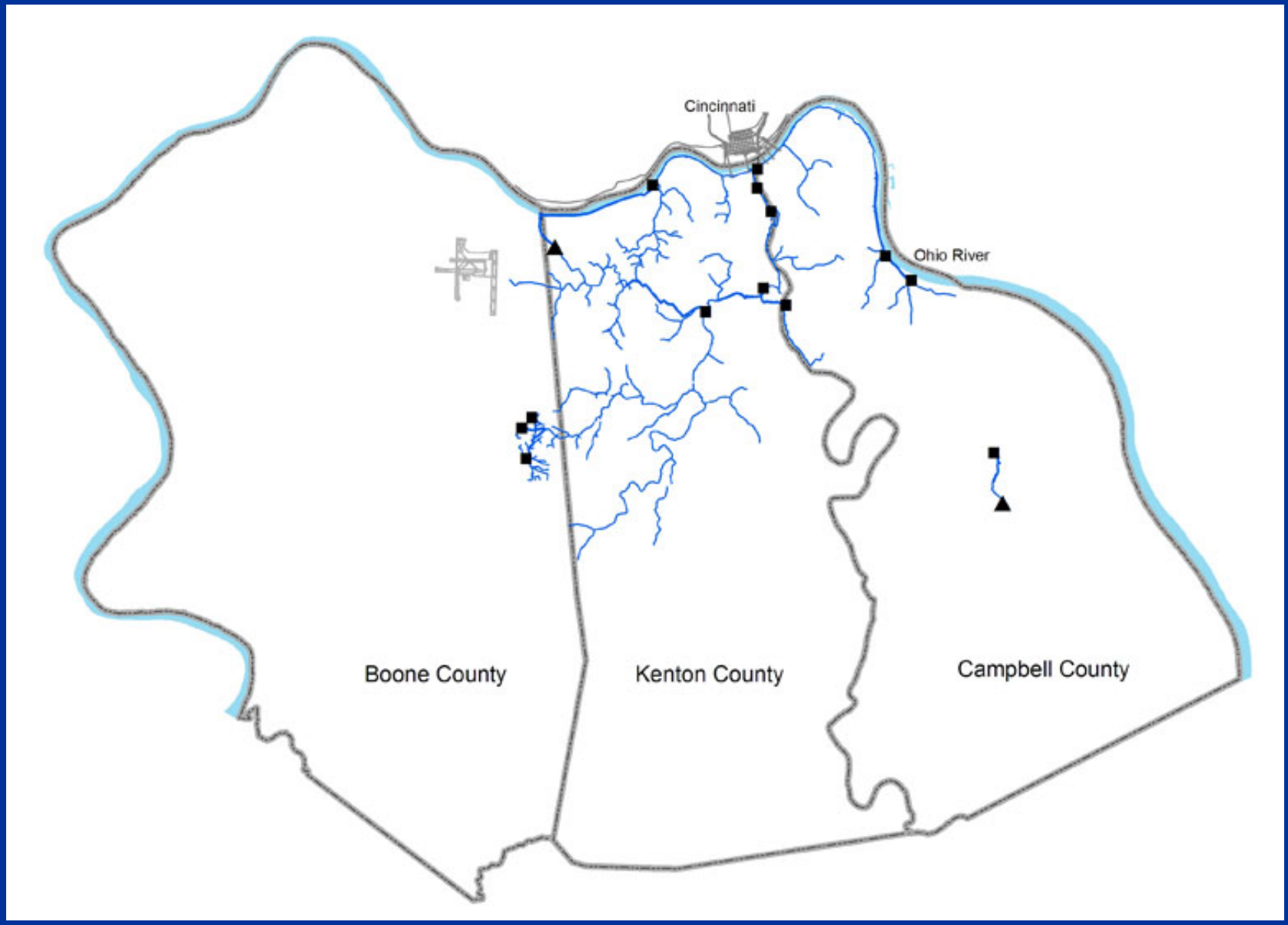
District's Service Area Expanded

Regional Sanitary Sewer Consolidation

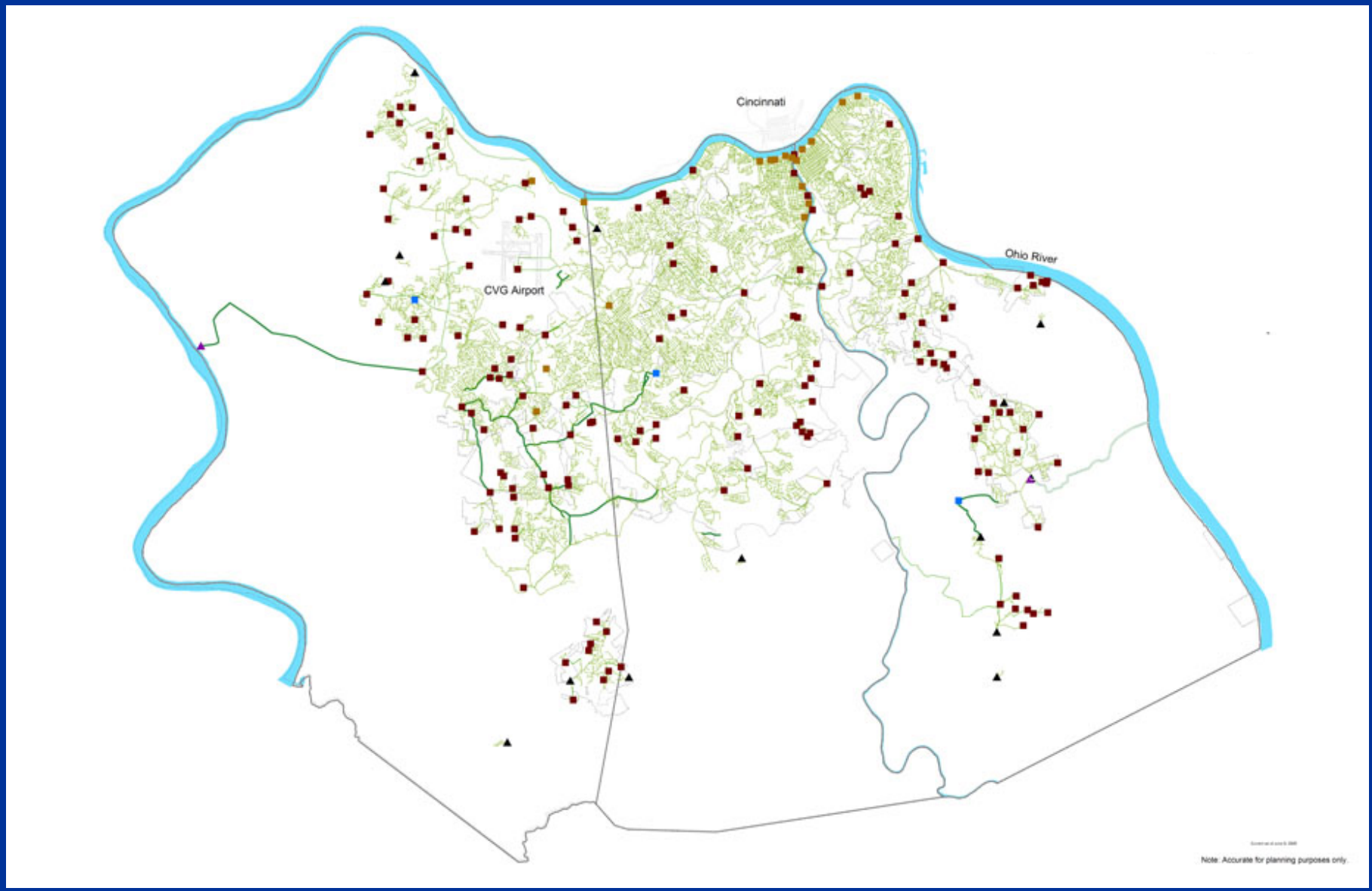
- July 1, 1995 - 28 cities turned over ownership of their sanitary sewer systems to SD1

- SD1 now has ownership, operation and maintenance responsibility of all sewer systems located in NKY, with the exception of Florence and Walton

SD1 Collection System Before 1995 Consolidation



Current SD1 Collection System



Yesterday…

Results of the Consolidation

District Expansion	***1994***	***2006***
Approximate Service Population	216,000	341,500
Miles of Sewer Line	124	1600
Employees	65	201
Average Water Treated (mgd)	30	33
Pump Stations	24	135
Catch Basins	0	4,387
Flood Pump Stations	0	15

Yesterday…

Planning for Infrastructure Needs

Regional Facilities Plan

Due to the recently inherited systems, KDOW required the District to complete a Regional Facilities Plan that outlined the following:

- Strengths and weaknesses of the existing system
- Recommendations for additional facilities required to serve the needs of NKY over the next 20 years
- Necessary steps to improve water quality, maintain environmental compliance and address system-wide capacity issues

Today...

Condition of Existing Collection System

Sewer Lines in Creek Beds

Deteriorating Manholes

Deteriorating Sewer Lines

Today...

Results of an Aging & Deteriorating Collection System

Raw Sewage Overflows

Today...

Addressing Collection System Needs

$22 Million Invested in Collection System Maintenance & Repairs Over Last Nine Years

- 16 miles of sewer line replaced
- 1,500 sewer line point repairs
- 710 miles of sewer line televised
- 570 miles of sewer line cleaned
- 11,480 catch basins cleaned
- 1,182 catch basins repaired
- 20 back flow valves installed

Today...

Addressing Collection System Needs

Pump Station Upgrades

- 125 pump stations in the District's service area
- $20 million investment in upgrades over the last ten years

Flood Station Improvements

- 15 flood pump stations along the river
- In 2002, completed $8 million in repairs and upgrades

Today...

Extending Sewer Service

Assessment Projects

- Reduces the public health risks associated with on-site disposal systems, such as septic tanks
- 20 projects completed since 1998
- 1,000 properties connected

Today...

Investments in Wastewater Treatment

Dry Creek Wastewater Treatment Plant

- Serves 270,000 residents
- Treats an average of 33 mgd
- Recently completed $8 million in upgrades to the solids handling system

- Invested over $60 million in the last 10 years in the operation and maintenance of Dry Creek

Today...

Regional Storm Water Management in Northern Kentucky

Storm Water Management Program

- Initiated in March 2003
- Designed to comply with U.S. EPA's Phase II Storm Water Regulations and prepare for the District to take over ownership and maintenance of the public storm sewer system
- Capital projects are currently on hold due to pending litigation

Today...

Investments in Storm Water Infrastructure

- **Fort Wright**

  $3.5 million pilot program that addressed illicit discharges and improper connections to storm and sanitary system

- **Newport**

  Invested $100,000 in 2004 to alleviate flooding issues caused by collapsed storm sewers

- **Woodlawn Creek Watershed**

  Master drainage plan that will comprehensively address flooding issues throughout the entire watershed

Today...

Cutting-Edge Educational Programming

- **Public Service Park**
  Outdoor education facility that has hosted over 3,000 students and 3,740 adults since 2004

- **Environmental Unit**
  Award-winning curriculum that has reached 12,000 students over the past two years
- **Classroom Presentations / Tours**
  Ongoing wastewater education programs, which includes tours of our treatment facility

Today...

Commitment to Community Engagement

Recent Public Involvement Initiatives

- Rate Study Focus Groups
- Storm Water Advisory Committee
- Storm Water Focus Groups
- ERWTP Public Workshops
- ERWTP Site Evaluation Committee

- Western Regional Collection System Workshops
- 20-Year Regional Facility Plan Workshops

Tomorrow…

Long-Term Plan to Address Sewer Overflows

Key Components SD1's Consent Decree

- Complete 52 initial watershed projects by 2014
- Demonstrate compliance with nine minimum controls for CSOs
- Develop a grease control program
- Conduct a self-assessment of the District's CMOM program
- Address power outages at pump stations
- Respond to, clean up and minimize the impact of SSOs
- Eliminate SSOs at specific pump stations

Estimated Cost = **$880 million** over 20 years

Tomorrow…

Two New Regional Wastewater Treatment Facilities

Eastern Regional

Capacity: 4 MGD

Completion: Fall 2007

Western Regional

Capacity: 20 MGD

Completion: 2013

Total Cost = $275 million # Overflows Addressed = 24

Tomorrow…

Challenges That Lie Ahead

Implementation of Consent Decree

- Watershed approach at risk
- Tight schedule to meet

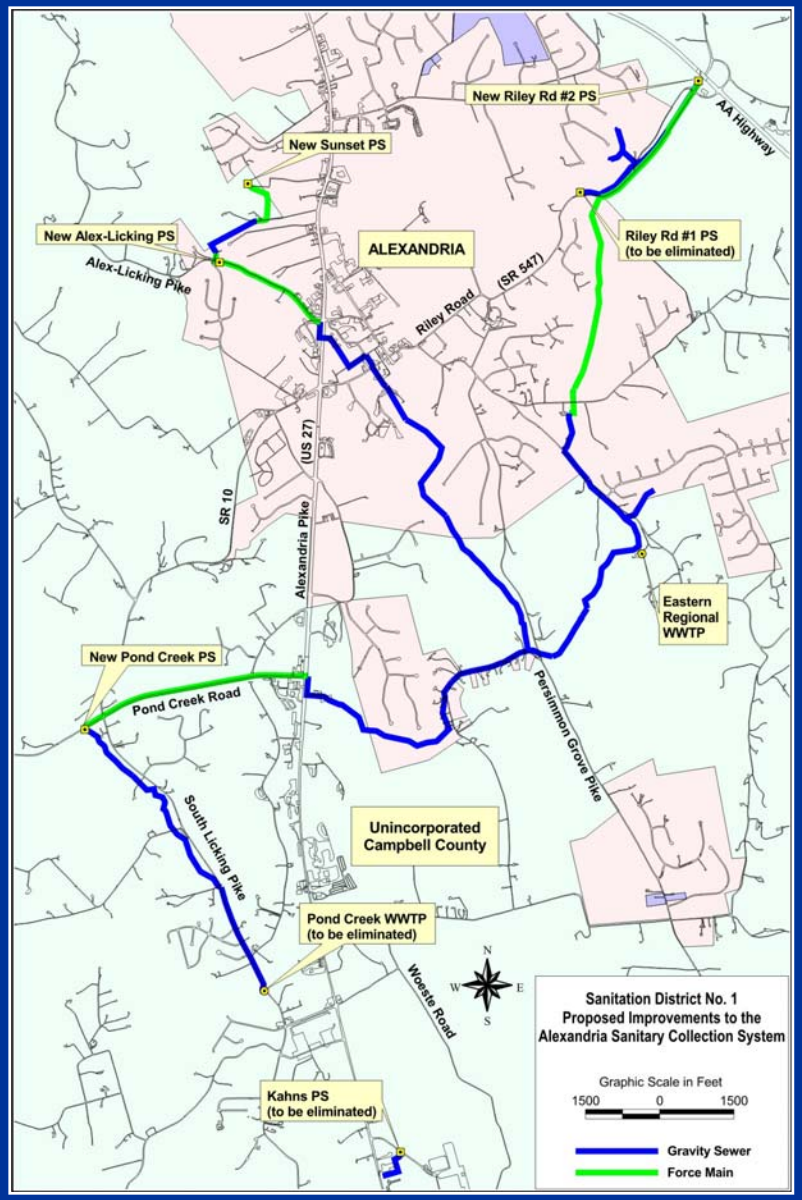
Storm Water Asset Transfer

- Operational and maintenance responsibilities for over 500 miles of storm sewer system

Lack of Federal and State Funding

- Nationwide, local communities now shoulder over 93% of the nearly $29 billion in annual costs for capital investments and operation

Eastern Regional Wastewater Treatment Plant Update



Collection System Improvements

- Installation of approximately 11 miles of sewer line – 60% of which is existing sewer line that will be replaced
- Replacement of 4 pump stations
- Elimination of 2 pump stations
- Construction of 1 new pump station
- Elimination of 4 small wastewater treatment plants

Eastern Regional Wastewater Treatment Plant Update

Entrance

Eastern Regional Wastewater Treatment Plant Update

Administration Building

Eastern Regional Wastewater Treatment Plant Update

Oxidation Ditch

Eastern Regional Wastewater Treatment Plant Update

Clarifiers

Eastern Regional Wastewater Treatment Plant Update

Clarifier

Eastern Regional Wastewater Treatment Plant Update

Equalization Tank

Eastern Regional Wastewater Treatment Plant Update

Influent Pump Station